

## LED WARNING LIGHT AND COMMUNICATION SYSTEM

The present invention claims priority to United States Provisional Patent Application entitled "Led Warning Signal Lights and Communication System,"

5 provisional patent application Serial Number 60/248,894 filed November 15, 2000, which is incorporated herein by reference in its entirety.

### BACKGROUND OF THE INVENTION

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Light bars or emergency lights of the type used on emergency vehicles such as fire trucks, police cars, and ambulances, utilize warning signal lights to produce a variety of light signals. These light signals involve the use of various colors and patterns. Generally, these warning signal lights consist of incandescent and halogen light sources having reflective back support members and colored filters.

15 Many problems exist with the known methods for producing warning light signals. One particular problem with known light sources is their reliance on mechanical components to revolve or oscillate the lamps to produce the desired light signal. Additionally, these components increase the size of the light bar or emergency lights which may adversely affect the vehicle's aerodynamic characteristics. Moreover, because of the relatively poor reliability of conventional lighting and the complexity of  
20 the present strobe rotational systems there is an increased likelihood that a breakdown of the light bar or light source will occur requiring the repair or replacement of the defective component. Finally, conventional light bars and light sources require a relatively large amount of electrical current during operation. The demands upon the electrical power system for a vehicle may therefore exceed available electrical resources reducing  
25 optimization of performance or worse, generating a potential hazard from shorted or over-heated systems.

Halogen lamps or gaseous discharge xenon lamps generally emanate large amounts of heat which is difficult to dissipate from a sealed light enclosure or emergency light and which may damage the electronic circuitry contained therein. In addition, these  
30 lamps consume large amounts of current requiring a large power supply, battery, or electrical source which may be especially problematic for use with a vehicle. These lamps also generate substantial electromagnetic emissions which may interfere with radio